UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

May 30, 2007

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations for the State Road 114 Ground Water Plume Superfund Site

FROM: David E. Cooper, Chair
National Remedy Review Board David E. Cooper

TO: Samuel Coleman, Director
Superfund Division
U.S. EPA Region 6

Purpose

The National Remedy Review Board (the Board) has completed its review of the proposed cleanup action for the State Road 114 Ground Water Plume Superfund Site in Hockley County, Texas. This memorandum documents the Board's advisory recommendations.

Context for Board Review

The Administrator announced the Board as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The Board furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The Board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The Board evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the

range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the Board makes advisory recommendations to the appropriate regional decision maker. The Region will then include these recommendations in the administrative record for the site, typically before it issues the proposed cleanup plan for public comment. While the Region is expected to give the board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the Region's final decision. The Board expects the Regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the Board does not change the Agency's current delegations or alter in any way the public's role in site decisions.

Overview of the Proposed Action

The State Road 114 Ground Water Plume site is located near Levelland, Texas in Hockley County. It is a former refinery site; the refinery operated for approximately 15 years and closed in 1954. The site is currently used by the Farmer's Co-Op Elevator Association. A 14-acre playa lake is located west of the former refinery location and was used as a disposal area for refinery wastes. In addition, there are five tar pits and a large excavation area that also received waste. Ground water beneath the site is contaminated with organic contaminants and metals, primarily of 1,2-dichloroethane and benzene. The plume of ground water contamination extends 0.7 miles beyond the site, resulting in the closure of several drinking water wells, and continues to migrate toward other wells.

NRRB Advisory Recommendations

The Board reviewed the information package describing this proposal and discussed related issues with the EPA project manager Vincent Malott and, by phone Diane Poteet of the Texas Commission on Environmental Quality (CEQ) on April 11, 2007. Based on this review and discussion, the Board offers the following comments:

1. The information presented to the Board did not demonstrate an unacceptable human health or ecological risk that would drive the proposed remedial actions for playa area sludge. Since the bulk of the preferred soil remedy (in excess of $4M out of a $5M remedy) would address the playa area, the Board recommends that the Region further evaluate ecological risk for the playa area sludge and surface water (e.g., phytotoxicity or comparison to an undisturbed playa). The lines of evidence provided by additional ecological risk information may help determine the reason for the lack of vegetation in the playa. If further evaluations find no unacceptable risk due to hazardous constituents in the sludge, the Board recommends using other authorities to restore the playa.

2. The Board notes that there are differences in the risk drivers and alternative analyses between the soil hotspots and the playa sludges, yet these two elements of the remedy are combined under the soil alternatives. The Board recommends that these two elements be evaluated individually, especially in light of comment #1 above.

3. As presented to the Board, the Region's preferred alternative would stabilize the sludge in the playa lake area and dispose of it in a trench located elsewhere in the area of contamination (AOC). The Board notes that the sludge may be a RCRA listed hazardous waste under certain circumstances; consequently, land disposal restrictions (LDRs) may be triggered if the sludge is disposed off-site or may be ARAR for on-site actions. The Board recommends that the decision documents clarify why LDRs would not be triggered as an ARAR under the preferred alternative. The Board also recommends that the Region consider a corrective action management unit (CAMU) approach if LDRs would be triggered, or explore the feasibility of off-site recycling of the sludge (i.e., the example described by the Texas CEQ representative from a State lead site).

4. The Board notes that Alternatives S-2 and S-3 for soil and sludge have treatment costs that differ by a factor of four. If the excavation and treatment for cold processing is $10M higher than for solidification, and there are no prospects for selling the tarry material for recycling, it may be appropriate not to carry Alternative S-3 through for full evaluation in the Region's feasibility study. The Board recommends that the Region obtain cost estimates from additional cold processing vendors and further evaluate potential beneficial reuse of sludge. If the Region proposes Alternative S-2, the Board recommends that the decision documents allow for flexibility concerning the type and amount of amendment used for solidification. For example, using a lower concentration of cement or other pozzolan (e.g., flyash) may reduce costs while achieving the strength goal and protective treatment levels.

5. The review package provides a brief description of source area characterization (e.g., distribution of contaminant mass) and contaminant plume delineation. Uncertainties in site characterization and plume delineation lead to uncertainties in modeling and design alternatives. The Board recognizes the need to provide preliminary details related to remedy design for cost estimating purposes, but given the above uncertainties, the Board recommends that the decision documents allow adequate flexibility during design to provide for the incorporation of new data to refine or optimize the remedy and its evaluation strategy (i.e., modeling and monitoring). In addition, the Board recommends that the decision documents clearly describe the different goals and methods of Alternative GW-3 (i.e., to use ground water extraction to contain the plume while natural processes attenuate the source) and Alternative GW-4 (to use both SVE and pump-and-treat technology to more aggressively remediate the source area and contaminant plume).

6. The review package indicates that 14 shallow wells and 9 deep wells would be constructed to monitor the impact of the ground water pump-and-treat system. Given the large areal extent of the ground water plume, the Board is concerned that this number of wells may not be sufficient to adequately monitor changes in the lateral and vertical hydraulic gradients and contaminant concentrations to evaluate plume capture. The Board recommends that the decision

documents incorporate adequate flexibility to allow refinement of the number, location, and depth of monitoring wells during design and thereafter as needed.

7. Three disposal options are being considered for the treated ground water: reinjection into the aquifer, delivery to the city water system, and delivery to an ethanol plant. The Board encourages the Region to continue the evaluation of beneficial uses for the treated ground water, including impacts on operation and maintenance and cost offsets (e.g., potential metals treatment by the ethanol plant or potential reduction credits from providing treated water to the city water system.)

The Board appreciates the Region's efforts in working together with the potentially responsible parties, State, and community groups at this site. We request that a draft response to these findings be included with the draft Proposed Plan when it is forwarded to your OSRTI Regional Support Branch for review. The Regional Support Branch will work with both me and your staff to resolve any remaining issues prior to your release of the Proposed Plan. Once your response is final and made part of the site's Administrative Record, then a copy of this letter and your response will be posted on the Board website (http://www.epa.gov/superfund/programs/nrrb/).

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at (703) 603-8763 should you have any questions.

cc: J. Woolford (OSRTI)
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NRRB members